

[0078] FIG. 3B illustrates an example flow diagram for an example intelligent and automatic connection activation operation in a wireless docking network, in accordance with an example embodiment of the invention.

[0079] FIG. 3C illustrates example application identifiers and corresponding example user preferences for an example intelligent and automatic connection activation operation in a wireless docking network, in accordance with an example embodiment of the invention.

[0080] FIG. 3D illustrates example applications and corresponding example operating parameters for an example intelligent and automatic connection activation operation in a wireless docking network, in accordance with an example embodiment of the invention.

[0081] FIG. 3E1 illustrates an example format for a wireless docking management frame for intelligent and automatic connection activation from a peripheral device to the docking center device, in accordance with an example embodiment of the invention.

[0082] FIG. 3E2 illustrates an example format for a wireless docking management frame for intelligent and automatic connection activation from the dockee device to the docking center device, in accordance with an example embodiment of the invention.

[0083] FIG. 4A illustrates an example sequence diagram for notification based on user proximity to a peripheral device in a wireless docking network, in accordance with an example embodiment of the invention.

[0084] FIG. 4B 1 illustrates an example format for a wireless docking management frame for information based on user proximity to a peripheral device from a peripheral device to the docking center device, in accordance with an example embodiment of the invention.

[0085] FIG. 4B2 illustrates an example format for a wireless docking management from the dockee device to the docking center device, in accordance with an example embodiment of the invention.

[0086] FIG. 4C illustrates an example flow diagram for an example notification of the proximity of a user to the peripheral device operation in a wireless docking network, in accordance with an example embodiment of the invention.

[0087] FIG. 4D1 illustrates an example network diagram of a wireless docking scenario where the wireless docking center device may determine that the user has approached the proximity of a peripheral device, in accordance with an example embodiment of the invention.

[0088] FIG. 4D2 illustrates an example network diagram of a wireless docking scenario where the wireless dockee device may determine that the user has approached the proximity of a peripheral device, in accordance with an example embodiment of the invention.

[0089] FIG. 4D3 illustrates an example network diagram of a wireless docking scenario where the wireless docking center device may automatically receive information of the proximity of the user to a particular one of the wireless peripheral devices, in accordance with an example embodiment of the invention.

[0090] FIG. 5A illustrates an example sequence diagram for redirecting data transmission between peripherals in a wireless docking network, in accordance with an example embodiment of the invention.

[0091] FIG. 5B illustrates another example sequence diagram for redirecting data transmission between peripherals in a wireless docking network, in accordance with an example embodiment of the invention.

[0092] FIG. 5C illustrates an example flow diagram for redirecting data transmission between peripherals in a wireless docking network, in accordance with an example embodiment of the invention.

[0093] FIG. 5D illustrates an example format for a wireless docking management frame for redirecting data transmission between peripherals, in accordance with an example embodiment of the invention.

## DISCUSSION OF EXAMPLE EMBODIMENTS OF THE INVENTION

[0094] In general, wireless docking provides the means of connecting a Wireless Dockee (WD) to a set of external peripheral devices (e.g., large screen monitor, keyboard, mouse, headset, external webcam, microphone, speaker, storage, game pad, printer) mostly for input/output purposes in different environments (e.g., home entertainment; home office; enterprise/corporate office; meeting room; public access workplaces like internet cafe, lounge, hotel, train, plane, bus; automotive environments). Here, WD means a range of portable devices like mobile phone, tablet, netbook, laptop, camera, camcorder, media player, game console. In traditional/legacy docking, a set of common peripherals are connected by wires to an electronic device (commonly called dock or docking station), and a portable device (mostly laptops) plugs-into the docking station to have connection with all the connected peripherals in one shot. As there is interesting and increasing trend of supporting wireless (e.g., Wi-Fi) by different kind of portable devices, a motivation for wireless docking is to have wireless connection between connected devices in a docking case. The intention is to improve user experience by having additional features, functions and flexibilities. In wireless docking, a logical entity, called Wireless Docking Center (WDC), manages a set of peripherals. A dockee device (WD) connects to the WDC to have access to the set or subset of all the peripherals managed by the WDC. In practice, WDC may be implemented in an independent physical device, or may be co-located in any other device (e.g., peripherals, WD). An example set-up of a wireless docking solution is shown in FIG. 1, where WDC is in an independent device. The term “docking”, as used below, primarily means wireless docking.

This section is organized into the following topics:

### A. WIRELESS DOCKING MANAGEMENT OF PERIPHERAL DEVICES

### B. POWER MANAGEMENT IN WIRELESS DOCKING

### C. INTELLIGENT AND AUTOMATIC CONNECTION ACTIVATION

### D. NOTIFICATION BASED ON USER PROXIMITY TO PERIPHERAL DEVICE

### E. REDIRECTING DATA TRANSMISSION BETWEEN PERIPHERALS

#### A. Wireless Docking Management of Peripheral Devices

[0095] FIG. 1 illustrates an example network diagram of a wireless docking set-up, showing examples of a wide variety